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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,935	02/08/2002	Osamu Mizuno	Q68468	7896

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EXAMINER

KIM, SANG K

ART UNIT	PAPER NUMBER
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3654

DATE MAILED: 09/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/067,935

Applicant(s)

MIZUNO, OSAMU

Examiner

SANG KIM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-12 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-5, 7-9, 11 and 12 is/are rejected.
7) ☒ Claim(s) 10 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 5 and 7-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Hosomi et al, U.S. Patent No. 5820068.

With respect to claims 1 and 7, Hosomi '068 shows a printer (1) comprising a paper holder (17) provided with a first guide portion (38) and a second guide portion (60) for positioning a roll of paper (s), the first guide portion in a first installation state (no reference number), the second guide portion in a second installation state (no reference number), and paper near end detecting means (24) comprising a first detector (64) and a second detector (65) disposed to be engageable with an end face of the roll of paper to detect that the amount of remaining paper is below a predetermined amount (see figures 11a-b), and a sensor (63) which senses operations of the first detector and the second detector; wherein the first detector (64) disposed closer to and is disengaged (see figure 11a, during the off state) from the end face of the roll of paper when the roll paper is retained into the first guide portion (38), and the second detector (65) disposed closer to and is disengaged (see figure 11b, during the on state) from the end face of the roll of paper when the roll of paper is retained into the second guide portion (60), and a plane formed by a locus of a movement of the center axis of the roll of paper when retained by the first guide portion (38, see figure 5), a plane formed by a locus of

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a movement of the center axis of the roll of paper when retained by the second guide portion (60, see figure 6), and an inner surface (see figure 1) of the paper holder defined between the first guide portion and the second guide portion.

With respect to claim 2, Hosomi '068 shows the first detector (64) and the second detector (65) are integrally connected by a connecting member (no reference number), see figure 11a.

al With respect to claim 5, Hosomi '068 shows a gap (no reference number, a gap between 64 and 65) is provided in the paper near end detecting means (24) through which paper drawn from the roll is conveyed after one of the detectors (65) gets disengaged with the end face of the roll of paper (end face of S), see figure 11a.

With respect to claims 8-9 and 11, Hosomi '068 shows a plate (no reference number) that connects said first and second detectors (64, 65) and is operable to pivot about a pivot axis (no reference number) located along one side of said plate and is parallel to the end face of the roll of paper (end face of S) to adjust with a trigger amount of detecting the depleted paper (24), see figures 10a-b, which shows a pivot movement.

With respect to claim 12, Hosomi '068 shows the operations of detectors (64 and 65) are sensed by a single sensor (67).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hosomi et al, U.S. Patent No. 5820068, in view of Sato, U.S. Patent No. 6502784 B1.

Hosomi discloses the claimed invention except for a detector movable to change the predetermined amount of paper that triggers a near end signal.

Sato teaches mounting paper detectors (7c, 7d) for detecting that the amount of paper left on a roll is below a predetermined amount so that they are movable to change the predetermined amount to allow for roll cores of different diameters.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the paper detectors of Hosomi movable as taught by Sato, to change the predetermined amount of paper sensed by the detectors to allow for roll cores of different diameters.

Response to Arguments

Claim 6 has been canceled.

Claims 7-12 have been added.

Applicant's arguments filed on 7/23/04 have been fully considered but they are not persuasive with respect to claims 1-5.

Applicant's amendments reciting in the independent claim 1, that the first detector is disengaged....etc., is still anticipated by Hosomi '068.

As stated above, Hosomi '068 shows the first detector (64) disposed closer to and is disengaged (see figure 11a, during the off state) from the end face of the roll of

paper when the roll paper is retained into the first guide portion (38), and the second detector (65) disposed closer to and is disengaged (see figure 11b, during the on state) from the end face of the roll of paper when the roll of paper is retained into the second guide portion (60).

Applicant argues that Hosomi's detectors (64, 65) are used together to detect the amount of paper remaining on the same roll. Applicant's detectors (33A, 33B) detect when the amount of residual paper gets below a certain amount on whether the paper is in the first guide and the second guide portions.

As stated above, Hosomi '068 is able to still function as same as applicant's claimed invention because the detectors (64, 65) are able to detect the amount of paper and move when it falls below a certain level from the first guide to the second guide portions.

Applicant argues that Hosomi's detectors (64, 65) are different structures and functions, since the detectors (33A, 33B) are offset to each other.

As stated above, Hosomi '068 shows a gap (no reference number, a gap between 64 and 65) is provided in the paper near end detecting means (24) through which paper drawn from the roll is conveyed after one of the detectors (65) gets disengaged with the end face of the roll of paper (end face of S), see figure 11a.

Applicant argues that both of the two detectors disclosed in Hosomi '068 requires movement of the switch and the detectors when detecting paper to be retained into the other of guide portions. On the other hand, applicant's respective detectors corresponding to each of the guide portions detect that a paper remaining amount is low

without moving the detectors in either of the two installment states of the printer, as reflected in claim 10. Examiner concurs with the applicant's statement.

Allowable Subject Matter

Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant's specification discloses subject matter which would be allowable if recited in a claim including all the limitations of claims 1 and 7, and further reciting how the first and second detectors (33a and 33b) engage the roll during the horizontal orientation...etc., as discussed in the specification.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang Kim whose telephone number is (703) 305-3712. The examiner can normally be reached Monday through Friday from 8:00 A.M. to 5:30 P.M. alternating Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathy Matecki can be reached on (703) 308-2688. The fax phone numbers are (703) 872-9326 for regular communications and (703) 872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

SK

9/18/04



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